General

Guideline Title

Treatment of primary breast cancer. A national clinical guideline.

Bibliographic Source(s)

Scottish Intercollegiate Guidelines Network (SIGN). Treatment of primary breast cancer. A national clinical guideline. Edinburgh (Scotland): Scottish Intercollegiate Guidelines Network (SIGN); 2013 Sep. 43 p. (SIGN publication; no. 134). [104 references]

Guideline Status

This is the current release of the guideline.

This guideline updates a previous version: Scottish Intercollegiate Guidelines Network (SIGN). Management of breast cancer in women. A national clinical guideline. Edinburgh (Scotland): Scottish Intercollegiate Guidelines Network (SIGN); 2005 Dec. 50 p. (SIGN publication; no. 84). [214 references]

Any amendments to the guideline in the interim period will be noted on the Scottish Intercollegiate Guidelines Network (SIGN) Web site .

Recommendations

Major Recommendations

Note from the Scottish Intercollegiate Guidelines Network (SIGN) and National Guideline Clearinghouse (NGC): In addition to these evidence-based recommendations, the guideline development group also identifies points of best clinical practice in the full-text guideline document.

Note: In this guideline SIGN is piloting new methodology, based on the principles of Grading of Recommendations Assessment, Development and Evaluation (GRADE). Further details are available at www.sign.ac.uk/pdf/gradeprincipals.pdf . The most apparent difference to other SIGN guidelines is the absence of grades of recommendation. The wording of the recommendation reflects how strongly the guideline development group believes following the recommendation will achieve the expected benefits. Strength of recommendation will be established on the basis of explicit consideration of each of the criteria established by the GRADE Working Group, and recorded in a considered judgement form specific to this stage of the process.

The strength of recommendation (reflected in the wording of the recommendation) and the levels of evidence (1++, 1+, 1-, 2++, 2+, 2-, 3, 4) are defined at the end of the "Major Recommendations" field.

Surgery

Breast Conservation Surgery

Invasive Breast Cancer

Women with invasive breast cancer who are undergoing breast surgery should be offered the choice of either breast conservation surgery or mastectomy.

In patients undergoing breast conservation surgery the radial tumour margins must be clear (≥1 mm).

Ductal Carcinoma in Situ (DCIS)

Women with DCIS who are undergoing breast surgery should be offered the choice of breast conservation surgery or mastectomy.

In women with DCIS undergoing conservation surgery the radial margins must be clear (≥1 mm).

The Role of Oncoplastic Therapeutic Mammoplasty

Patients with larger tumours may be considered for oncoplastic surgery instead of mastectomy.

Management of the Axilla

Timing of Sentinel Lymph Node Biopsy (SLNB) in Patients Undergoing Neoadjuvant Chemotherapy

All patients with invasive breast cancer who are operable should have axillary surgery.

If there is proven axillary lymph node disease preoperatively axillary lymph node clearance should be undertaken; if there is no proven disease the optimal axillary procedure is a SLNB (or if not available axillary node sample is an alternative).

If the SLNB contains tumour, further treatment to the axilla, either axillary lymph node dissection or radiotherapy, should be given. Patients undergoing breast conservation surgery and radiotherapy for T1 or T2 and clinically node-negative breast cancer and who have one or two positive nodes at SLNB may be considered for no further treatment to the axilla.

Radiotherapy

Radiotherapy Following Breast Conservation Surgery for Invasive Breast Cancer

Postoperative external beam radiotherapy to the conserved breast should be considered for all patients undergoing conservation surgery for early breast cancer.

Shorter fractionation schedules (e.g., 4,005 cGy in 15 fractions over three weeks) should be considered in early breast cancer.

Radiotherapy Boost

Radiotherapy boost is recommended in all patients aged 50 years or under at diagnosis.

Radiotherapy boost should be considered in patients over 50 years at diagnosis, especially those with high-grade cancer.

Post-Mastectomy Radiotherapy

Post-mastectomy radiotherapy should be considered in patients with lymph node-positive breast cancer if they have high risk of recurrence (≥4 positive lymph nodes or T3/4 tumours).

Post-mastectomy radiotherapy may be considered in patients with intermediate risk of recurrence (high-risk node-negative tumours or one to three positive axillary lymph nodes).

DCIS Following Breast Conservation Surgery for Invasive Breast Cancer

All patients with DCIS should be considered for breast radiotherapy following breast conservation surgery.

Adjuvant Systemic Therapy

Adjuvant Chemotherapy

Anthracyclines

Adjuvant chemotherapy should be considered for all patients with breast cancer where benefit outweighs risk.

Higher dose anthracycline-based chemotherapy (i.e., six cycles of 5-fluorouracil, adriamycin and cyclophosphamide [FAC] or 5-fluorouracil, cyclophosphamide and epirubicin [FEC] or equivalent) is recommended rather than six cycles of cyclophosphamide, methotrexate and 5-fluorouracil (CMF) or four cycles of adriamycin, cyclophosphamide (AC).

Duration of Therapy

Adjuvant anthracycline-taxane combination chemotherapy should be considered for all patients with breast cancer where the additional benefit outweighs risk.

Primary prophylaxis with granulocyte colony stimulating factors should be considered where the risk of febrile neutropenia exceeds 20%.

Trastuzumab

Adjuvant trastuzumab should be considered in all patients with human epidermal growth factor receptor 2 (HER-2) positive breast cancer who receive adjuvant chemotherapy.

Adjuvant trastuzumab should not be given concurrently with anthracyclines but may be given either concurrently with taxane-based regimens or sequentially.

Cardiac function should be monitored in patients being treated with anthracyclines and/or trastuzumab.

Trastuzumab should be used with caution in patients with significant cardiac comorbidity. The benefits of adjuvant chemotherapy with or without trastuzumab may be outweighed by the potential harms in these patients, and treatment should only be recommended after careful consideration.

Adjuvant Endocrine Therapy

Tamoxifen

Pre-menopausal women with oestrogen receptor (ER) positive invasive breast cancer should be treated with tamoxifen for at least five years, to a total of ten years, unless there are contraindications or side effects.

Aromatase Inhibitors

Postmenopausal women with ER positive early breast cancer should be considered for treatment with aromatase inhibitors as an alternative to tamoxifen, either:

- As an upfront aromatase inhibitor for five years, or
- By switching to an aromatase inhibitor after two to three years of tamoxifen for a total of five years

Patients who are postmenopausal and have completed five years of tamoxifen may be considered for extended (five years) treatment with letrozole.

Bisphosphonates

Patients with early invasive breast cancer should have a baseline dual energy X-ray absorptiometry (DEXA) scan to assess bone mineral density if they:

- Are starting adjuvant aromatase inhibitors
- Have treatment-induced menopause
- Are starting ovarian suppression therapy

A DEXA scan is not routinely needed in those who are receiving tamoxifen alone, regardless of pretreatment menopausal status.

Offer bisphosphonates to patients identified by Algorithms 1 and 2 (see Annexes 3 and 4 in original guideline document).

Neoadjuvant Systemic Therapy

Neoadjuvant Chemotherapy

Neoadjuvant chemotherapy should be considered for all patients with breast cancer whose disease is either:

- Inoperable (locally advanced or inflammatory) but localised to the breast/locoregional lymph node groups, or
- The only surgical option is mastectomy and downstaging might offer the patient the opportunity for breast conservation.

Anthracycline-Taxane Combinations

Anthracycline-taxane-based chemotherapy combinations should be considered for all patients receiving neoadjuvant chemotherapy.

Trastuzumab

Patients with HER-2 positive breast cancer, receiving neoadjuvant chemotherapy, should receive trastuzumab, either as adjuvant treatment or with non-anthracycline-based neoadjuvant chemotherapy.

Cardiac function should be monitored in patients being treated with anthracyclines and/or trastuzumab.

Trastuzumab should be used with caution in patients with significant cardiac comorbidity. The benefits of adjuvant chemotherapy with or without trastuzumab may be outweighed by the potential harms in these patients, and treatment should only be recommended after careful consideration.

Neoadjuvant Endocrine Therapy

Aromatase inhibitor is recommended for ER positive postmenopausal women receiving neoadjuvant endocrine therapy.

Definitions:

Levels of Evidence

1++: High quality meta-analyses, systematic reviews of randomised controlled trials (RCTs), or RCTs with a very low risk of bias

1+: Well-conducted meta-analyses, systematic reviews of RCTs, or RCTs with a low risk of bias

1-: Meta-analyses, systematic reviews of RCTs, or RCTs with a high risk of bias

2++: High quality systematic reviews of case control or cohort studies

High quality case control or cohort studies with a very low risk of confounding or bias and a high probability that the relationship is causal

2+: Well-conducted case control or cohort studies with a low risk of confounding or bias and a moderate probability that the relationship is causal

2-: Case control or cohort studies with a high risk of confounding or bias and a significant risk that the relationship is not causal

3: Non-analytic studies (e.g., case reports, case series)

4: Expert opinion

Strength of Recommendation

Recommendations will either be unconditional (strong evidence, no important drawbacks) or conditional (weaker evidence, serious potential drawbacks).

Clinical Algorithm(s)

The following algorithms are provided in the original guideline document:

- Algorithm 1: Adjuvant treatment associated with ovarian suppression/failure with or without concomitant aromatase inhibitor use in women who experience premature menopause
- Algorithm 2: Postmenopausal adjuvant treatment with aromatase inhibitors

Scope

Disease/Condition(s)

Breast cancer

Guideline Category

Management

Treatment

Clinical Specialty

Family Practice

Nursing

Obstetrics and Gynecology

Oncology

Pathology

Radiation Oncology

Radiology

Surgery

Intended Users

Advanced Practice Nurses

Clinical Laboratory Personnel

Nurses

Patients

Physician Assistants

Physicians

Guideline Objective(s)

To provide evidence-based guidelines for the treatment of patients with operable early breast cancer, including surgery, chemotherapy, radiotherapy, endocrine therapy and other therapies (e.g., biological therapy)

Note: The guideline excludes diagnosis, staging, follow up, and management of patients with metastatic disease. The use of complementary therapies and lifestyle management, including diet, are not addressed.

Target Population

Patients with breast cancer

Interventions and Practices Considered

1. Surgery:
    - Breast conserving surgery (radial tumour margins clear ≥1 mm)
    - Mastectomy

    - Oncoplastic therapeutic mammoplasty
    - Axillary surgery (sentinel lymph node biopsy [SLNB])
2. Radiotherapy:
    - Postoperative external beam radiotherapy
    - Radiotherapy boost
    - Post-mastectomy radiotherapy
3. Systemic therapy:
    - Adjuvant chemotherapy (anthracyclines, trastuzumab)
    - Neoadjuvant chemotherapy (anthracycline-taxane combination therapy, trastuzumab)
    - Adjuvant and neoadjuvant endocrine therapy (tamoxifen, aromatase inhibitors, letrozole)
    - Bisphosphonates

Major Outcomes Considered

- Recurrence of disease
- Survival rates
- Treatment morbidity
- Cosmetic outcomes
- Quality of life

Methodology

Methods Used to Collect/Select the Evidence

Searches of Electronic Databases

Description of Methods Used to Collect/Select the Evidence

Systematic Literature Review

The evidence base for this guideline was synthesised in accordance with Scottish Intercollegiate Guidelines Network (SIGN) methodology. A systematic review of the literature was carried out using an explicit search strategy devised by a SIGN Evidence and Information Scientist. Databases searched include MEDLINE, EMBASE, CINAHL, PsycINFO and the Cochrane Library. The year range covered was 2003 to 2011. Internet searches were carried out on various websites including the US National Guideline Clearinghouse (NGC). The main searches were supplemented by material identified by individual members of the development group. Each of the selected papers was evaluated by two members of the group using standard SIGN methodological checklists before conclusions were considered as evidence.

Literature Search for Patient Issues

At the start of the guideline development process, a SIGN Evidence and Information Scientist conducted a literature search for qualitative and quantitative studies that addressed patient issues of relevance to management of patients with early breast cancer. Databases searched include MEDLINE, EMBASE, CINAHL and PsycINFO, and the results were summarised and presented to the guideline development group.

Number of Source Documents

Not stated

Methods Used to Assess the Quality and Strength of the Evidence

Weighting According to a Rating Scheme (Scheme Given)

Rating Scheme for the Strength of the Evidence

Levels of Evidence

1++: High quality meta-analyses, systematic reviews of randomised controlled trials (RCTs), or RCTs with a very low risk of bias

1+: Well-conducted meta-analyses, systematic reviews of RCTs, or RCTs with a low risk of bias

1-: Meta-analyses, systematic reviews of RCTs, or RCTs with a high risk of bias

2++: High quality systematic reviews of case control or cohort studies

High quality case control or cohort studies with a very low risk of confounding or bias and a high probability that the relationship is causal

2+: Well-conducted case control or cohort studies with a low risk of confounding or bias and a moderate probability that the relationship is causal

2-: Case control or cohort studies with a high risk of confounding or bias and a significant risk that the relationship is not causal

3: Non-analytic studies (e.g., case reports, case series)

4: Expert opinion

Methods Used to Analyze the Evidence

Review of Published Meta-Analyses

Systematic Review with Evidence Tables

Description of the Methods Used to Analyze the Evidence

Once papers have been selected as potential sources of evidence, the methodology used in each study is assessed to ensure its validity. The result of this assessment will affect the level of evidence allocated to the paper, which will in turn influence the grade of recommendation that it supports.

The methodological assessment is based on a number of key questions that focus on those aspects of the study design that research has shown to have a significant influence on the validity of the results reported and conclusions drawn. These key questions differ between study types, and a range of checklists is used to bring a degree of consistency to the assessment process. Scottish Intercollegiate Guidelines Network (SIGN) has based its assessments on the MERGE (Method for Evaluating Research and Guideline Evidence) checklists developed by the New South Wales Department of Health, which have been subjected to wide consultation and evaluation. These checklists were subjected to detailed evaluation and adaptation to meet SIGN's requirements for a balance between methodological rigour and practicality of use.

The assessment process inevitably involves a degree of subjective judgement. The extent to which a study meets a particular criterion - e.g., an acceptable level of loss to follow up - and, more importantly, the likely impact of this on the reported results from the study will depend on the clinical context. To minimise any potential bias resulting from this, each study must be evaluated independently by at least two group members. Any differences in assessment should then be discussed by the full group. Where differences cannot be resolved, an independent reviewer or an experienced member of SIGN Executive staff will arbitrate to reach an agreed quality assessment.

Evidence Tables

Evidence tables are compiled by SIGN executive staff based on the quality assessments of individual studies provided by guideline development group members. The tables summarise all the validated studies identified from the systematic literature review relating to each key question. They are presented in a standard format to make it easier to compare results across studies, and will present separately the evidence for each outcome measure used in the published studies. These evidence tables form an essential part of the guideline development record and ensure that the basis of the guideline development group's recommendations is transparent.

Additional details can be found in the companion document titled "SIGN 50: A Guideline Developers' Handbook." (Edinburgh [Scotland]: Scottish Intercollegiate Guidelines Network. [SIGN publication; no. 50]), available from the SIGN Web site .

Methods Used to Formulate the Recommendations

Expert Consensus

Description of Methods Used to Formulate the Recommendations

Synthesising the Evidence

Guideline recommendations are graded to differentiate between those based on strong evidence and those based on weak evidence. This judgement is made on the basis of an (objective) assessment of the design and quality of each study and a (perhaps more subjective) judgement on the consistency, clinical relevance and external validity of the whole body of evidence. The aim is to produce a recommendation that is evidence-based, but which is relevant to the way in which health care is delivered in Scotland and is therefore implementable.

It is important to emphasise that the grading does not relate to the importance of the recommendation, but to the strength of the supporting evidence and, in particular, to the predictive power of the study designs from which that data was obtained. Thus, the grading assigned to a recommendation indicates to users the likelihood that, if that recommendation is implemented, the predicted outcome will be achieved.

Considered Judgement

It is rare for the evidence to show clearly and unambiguously what course of action should be recommended for any given question. Consequently, it is not always clear to those who were not involved in the decision making process how guideline developers were able to arrive at their recommendations, given the evidence they had to base them on. In order to address this problem, Scottish Intercollegiate Guidelines Network (SIGN) has introduced the concept of considered judgement.

Under the heading of considered judgement, guideline development groups summarise their view of the total body of evidence covered by each evidence table.

Each guideline group considers the following factors:

- Quantity, quality, and consistency of evidence
- External validity (generalisability) of studies
- Directness of application to the target population for the guideline
- Any evidence of potential harms associated with implementation of a recommendation
- Clinical impact (i.e., the extent of the impact on the target patient population, and the resources needed to treat them in accordance with the recommendation)
- Whether, and to what extent, any equality groups may be particularly advantaged or disadvantaged by the recommendations made
- Implementability (i.e., how practical it would be for the National Health Service [NHS] Scotland to implement the recommendation)

Then the group is asked to summarise its view on all of these issues, both the quality of the evidence and its potential impact, before making a graded recommendation. This summary should be succinct, and taken together with its views of the level of evidence represent the first draft of the text that will appear in the guideline immediately before a graded recommendation.

Additional detail about SIGN's process for formulating guideline recommendations is provided in Section 7 of the companion document titled "SIGN 50: A Guideline Developers' Handbook." (Edinburgh [Scotland]: Scottish Intercollegiate Guidelines Network. [SIGN publication; no. 50], available from the SIGN Web site .

Rating Scheme for the Strength of the Recommendations

Note: In this guideline Scottish Intercollegiate Guidelines Network (SIGN) is piloting new methodology, based on the principles of Grading of Recommendations Assessment, Development and Evaluation (GRADE). Further details are available at www.sign.ac.uk/pdf/gradeprincipals.pdf . The most apparent difference to other SIGN guidelines is the absence of grades of recommendation. The wording of the recommendation reflects how strongly the guideline development group believes following the recommendation will achieve the expected benefits.

Strength of Recommendation

Recommendations will either be unconditional (strong evidence, no important drawbacks) or conditional (weaker evidence, serious potential drawbacks).

Cost Analysis

A formal cost analysis was not performed and published cost analyses were not reviewed.

Method of Guideline Validation

External Peer Review

Internal Peer Review

Description of Method of Guideline Validation

The national open meeting is the main consultative phase of Scottish Intercollegiate Guidelines Network (SIGN) guideline development.

Peer Review

All SIGN guidelines are reviewed in draft form by independent expert referees, who are asked to comment primarily on the comprehensiveness and accuracy of interpretation of the evidence base supporting the recommendations in the guideline. A number of general practitioners (GPs) and other primary care practitioners also provide comments on the guideline from the primary care perspective, concentrating particularly on the clarity of the recommendations and their assessment of the usefulness of the guideline as a working tool for the primary care team. The draft is also sent to at least two lay reviewers in order to obtain comments from the patient's perspective.

It should be noted that all reviewers are invited to comment as individuals, not as representatives of any particular organisation or group. Corporate interests, whether commercial, professional, or societal have an opportunity to make representations at the national meeting stage where they can send representatives to the meeting or provide comment on the draft produced for that meeting. Peer reviewers are asked to complete a declaration of interests form.

The comments received from peer reviewers and others are carefully tabulated and discussed with the Chair and with the guideline development group. Each point must be addressed and any changes to the guideline as a result noted or, if no change is made, the reasons for this recorded.

As a final quality control check prior to publication, the guideline and the summary of peer reviewers' comments are reviewed by the SIGN Editorial Group for that guideline to ensure that each point has been addressed adequately and that any risk of bias in the guideline development process as a whole has been minimised. Each member of the guideline development group is then asked formally to approve the final guideline for publication.

Evidence Supporting the Recommendations

Type of Evidence Supporting the Recommendations

The type of supporting evidence is identified and graded for each recommendation (see the "Major Recommendations" field).

Benefits/Harms of Implementing the Guideline Recommendations

Potential Benefits

- Optimal screening for and management of breast cancer can increase the overall and disease-free survival rate and reduce the risk of disease recurrence.
- Improved quality of life

Potential Harms

- Adverse effects of hormone therapy include venous thromboembolism, menopausal symptoms, endometrial cancer, nausea, change in bone mineral density, and fracture.
- Harms/risks of aromatase inhibitors chemotherapy include osteonecrosis of the jaw, renal and gastrointestinal effects.
- Adverse effects of adjuvant radiotherapy include pain and toxicity.
- Trastuzumab should be used with caution in patients with significant cardiac comorbidity. The benefits of adjuvant chemotherapy with or without trastuzumab may be outweighed by the potential harms in these patients, and treatment should only be recommended after careful consideration.
- For sentinel lymph node biopsy after neoadjuvant chemotherapy two meta-analyses of 2,148 and 1,799 node-negative patients have shown identification rates of 90.9% and 89.6%, respectively, and false negative rate of 10.5% and 8.4%, respectively.
- In one study, there was an increased risk of moderate to severe fibrosis from 13% to 27% in patients who received radiotherapy boost (some of which may be accountable to older techniques).

Qualifying Statements

Qualifying Statements

- This guideline is not intended to be construed or to serve as a standard of care. Standards of care are determined on the basis of all clinical data available for an individual case and are subject to change as scientific knowledge and technology advance and patterns of care evolve. Adherence to guideline recommendations will not ensure a successful outcome in every case, nor should they be construed as including all proper methods of care or excluding other acceptable methods of care aimed at the same results. The ultimate judgement must be made by the appropriate healthcare professional(s) responsible for clinical decisions regarding a particular clinical procedure or treatment plan. This judgement should only be arrived at following discussion of the options with the patient, covering the diagnostic and treatment choices available. It is, however, advised that significant departures from the national guideline or any local guidelines derived from it should be fully documented in the patient's case notes at the time the relevant decision is taken.
- Recommendations within this guideline are based on the best clinical evidence. Some recommendations may be for medicines prescribed outwith the marketing authorisation (MA) also known as product licence. This is known as 'off label' use.
  Medicines may be prescribed off label in the following circumstances:

  - For an indication not specified within the marketing authorization
  - For administration via a different route
  - For administration of a different dose
  - For a different patient population

  An unlicensed medicine is a medicine which does not have MA for medicinal use in humans.

  Generally the off label use of medicines becomes necessary if the clinical need cannot be met by licensed medicines within the marketing authorisation. Such use should be supported by appropriate evidence and experience.

  "Prescribing medicines outside the conditions of their marketing authorisation alters (and probably increases) the prescribers' professional responsibility and potential liability."

  The General Medical Council (GMC) recommends that when prescribing a medicine off-label, doctors should:

  - Be satisfied that such use would better serve the patient's needs than an authorised alternative (if one exists).
  - Be satisfied that there is sufficient evidence/experience of using the medicines to show its safety and efficacy, seeking the necessary information from appropriate sources.
  - Record in the patient's clinical notes the medicine prescribed and, when not following common practice, the reasons for the choice.
  - Take responsibility for prescribing the medicine and for overseeing the patient's care, including monitoring the effects of the medicine.

  Non-medical prescribers should ensure that they are familiar with the legislative framework and their own professional prescribing standards.

  Prior to any prescribing, the licensing status of a medication should be checked in the current version of the British National Formulary (BNF). The prescriber must be competent, operate within the professional code of ethics of their statutory body and the prescribing practices of their employer.

Implementation of the Guideline

Description of Implementation Strategy

Implementation Strategy

Implementation of national clinical guidelines is the responsibility of each National Health Service (NHS) Board and is an essential part of clinical governance. Mechanisms should be in place to review care provided against the guideline recommendations. The reasons for any differences should be assessed and addressed where appropriate. Local arrangements should then be made to implement the national guideline in individual hospitals, units and practices.

Refer to Section 9 in the original guideline for information on resource implications associated with implementing the key clinical recommendations and advice on audit as a tool to aid implementation.

Implementation Tools

Audit Criteria/Indicators

Clinical Algorithm

Mobile Device Resources

Quick Reference Guides/Physician Guides

For information about availability, see the *Availability of Companion Documents* and *Patient Resources* fields below.

Institute of Medicine (IOM) National Healthcare Quality Report Categories

IOM Care Need

Getting Better

Living with Illness

IOM Domain

Effectiveness

Patient-centeredness

Identifying Information and Availability

Bibliographic Source(s)

Scottish Intercollegiate Guidelines Network (SIGN). Treatment of primary breast cancer. A national clinical guideline. Edinburgh (Scotland): Scottish Intercollegiate Guidelines Network (SIGN); 2013 Sep. 43 p. (SIGN publication; no. 134). [104 references]

Adaptation

Not applicable: The guideline was not adapted from another source.

Date Released

1998 Oct (revised 2013 Sep)

Guideline Developer(s)

Scottish Intercollegiate Guidelines Network - National Government Agency [Non-U.S.]

Source(s) of Funding

Scottish Executive Health Department

Guideline Committee

Guideline Development Group

Composition of Group That Authored the Guideline

Guideline Development Group: Professor Steven D Heys (*Chair*), Head, Division of Applied Medicine and Co-Director, Institute of Medical Sciences, Aberdeen; Dr Abdulla Alhasso, Consultant Clinical Oncologist, Beatson West of Scotland Cancer Centre, Glasgow; Ms Gillian Barmack, Pharmacist, Beatson West of Scotland Cancer Centre, Glasgow; Dr Sophie Barrett, Consultant Medical Oncologist, Beatson West of Scotland Cancer Centre, Glasgow; Dr Carolyn, Bedi Consultant Clinical Oncologist, Edinburgh Cancer Centre; Dr Hilary Dobson, Radiologist and Clinical Director, West of Scotland Breast Screening Service, Glasgow; Dr Graeme Lumsden, Consultant Clinical Oncologist, Beatson West of Scotland Cancer Centre, Glasgow; Dr Iain MacPherson, Clinical Senior Lecturer, Beatson Institute for Cancer Research, Glasgow; Dr Elizabeth Mallon, Consultant Pathologist, Western Infirmary, Glasgow; Ms Jan Manson, Evidence and Information Scientist, SIGN; Mr Glyn Neades, Consultant Breast Surgeon, Western General Hospital, Edinburgh; Dr Ravi Sharma, Consultant Clinical Oncologist, Aberdeen Royal Infirmary; Miss Pat Shields, Patient representative, Orkney; Ms Ailsa Stein, Programme Manager, SIGN; Ms Eva Weiler-Mithoff, Consultant Plastic Surgeon, Glasgow Royal Infirmary

Financial Disclosures/Conflicts of Interest

Declarations of interests were made by all members of the guideline development group. Further details are available from the Scottish Intercollegiate Guidelines Network (SIGN) Executive.

Guideline Status

This is the current release of the guideline.

This guideline updates a previous version: Scottish Intercollegiate Guidelines Network (SIGN). Management of breast cancer in women. A national clinical guideline. Edinburgh (Scotland): Scottish Intercollegiate Guidelines Network (SIGN); 2005 Dec. 50 p. (SIGN publication; no. 84). [214 references]

Any amendments to the guideline in the interim period will be noted on the Scottish Intercollegiate Guidelines Network (SIGN) Web site .

Guideline Availability

Electronic copies: Available in Portable Document Format (PDF) from the Scottish Intercollegiate Guidelines Network (SIGN) Web site

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Availability of Companion Documents

The following are available:

- Quick reference guide: treatment of primary breast cancer. Edinburgh (Scotland): Scottish Intercollegiate Guidelines Network; 2013 Sep. 2 p. Electronic copies: Available in Portable Document Format (PDF) from the Scottish Intercollegiate Guidelines Network (SIGN) Web site .
- SIGN 50: A guideline developer's handbook. Edinburgh (Scotland): Scottish Intercollegiate Guidelines Network; 2011 Sep. 111 p. (SIGN publication; no. 50). Electronic copies available from the SIGN Web site .
- Policy statement on the grading of recommendations in SIGN guidelines. Edinburgh (Scotland): Scottish Intercollegiate Guidelines Network; 2013. 2 p. Electronic copies: Available in PDF from the SIGN Web site .

In addition, Section 9 in the original guideline document contains key points to audit.

Executive summaries of SIGN guidelines are available for mobile devices through the guidelines app on the SIGN Web site .

Patient Resources

None available

NGC Status

This summary was completed by ECRI on July 28, 1999. The information was verified by the guideline developer as of August 19, 1999. This NGC summary was updated by ECRI on March 3, 2006. The updated information was verified by the guideline developer on April 6, 2006. This summary was updated by ECRI Institute on January 3, 2014.

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